WEST Search History

DATE: Wednesday, June 25, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB	B,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L9	L8 and Carson	4	L9
L8	L6 and arthritis	116	L8
L7	L6 and arthritogenic	0	L7
L6	L5 and bacteria	132	L6
L5	L4 and TGF	145	L5
L4	L3 and DNA	345	L4
L3	L1 and human	358	L3
L2	L1 and danJp1	1	L2
L1	dnaJ	391	L1

END OF SEARCH HISTORY

End of Result Set

Generate Collection

L2: Entry 1 of 1

File: PGPB

Oct 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020146759

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020146759 A1

TITLE: Stress proteins and peptides and methods of use thereof

PUBLICATION-DATE: October 10, 2002

INVENTOR-INFORMATION:

NAME

CITY

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COUNTRY

RULE-47

Albani, Salvatore

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Prakken, Berent J.

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US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 530/350, 536/23.5

CLAIMS:

- 1. A substantially pure HLA pan DR-binding peptide comprising a fragment of a stress protein that binds to one or more MHC class II molecules.
- 2. The substantially pure peptide of claim 1, wherein the peptide binds to HLADR1, DR4, and DR7.
- 3. The substantially pure peptide of claim 1, wherein the peptide comprises an amino acid sequence that is conserved between human and bacterial heat shock proteins.
- 4. The substantially pure peptide of claim 1, wherein the peptide comprises an amino acid sequence that is conserved between human and mycobacterial proteins.
- 5. The substantially pure peptide of claim 1, wherein the peptide is at least 70% identical to a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 6. The substantially pure peptide of claim 5, wherein the peptide is at least 80% identical to a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 7. The substantially pure peptide of claim 5, wherein the peptide is at least 90% identical to a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 8. The substantially pure peptide of claim 5, wherein the peptide is at least 95% identical to a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 9. The substantially pure peptide of claim 5, wherein the peptide has a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 10. The substantially pure peptide of claim 1, wherein the stress protein is a heat shock protein.
- 11. The substantially pure peptide of claim 10, wherein the heat shock protein is a bacterial heat shock protein.
- 12. The substantially pure peptide of claim 10, wherein the heat shock protein is a mycobacterium species heat shock protein.
- 13. The substantially pure peptide of claim 12, wherein the mycobacterium species

heat shock protein is hsp65 or hsp60.

- 14. The substantially pure peptide of claim 10, wherein the heat shock protein is a mammalian heat shock protein.
- 15. The substantially pure peptide of claim 14, wherein the mammalian heat shock protein is a human heat shock protein.
- 16. The substantially pure peptide of claim 15, wherein the human heat shock protein is human hsp60.
- 17. The substantially pure peptide of claim 1, wherein the fragment is about 10 to 30 amino acids in length.
- 18. The substantially pure peptide of claim 17, wherein the fragment is about 15 to 25 amino acids in length.
- 19. The substantially pure peptide of claim 17, wherein the fragment is about 15 to 20 amino acids in length.
- 20. The substantially pure peptide of claim 1, wherein the peptide has one or more D-amino acids.
- 21. The substantially pure peptide of claim 5, wherein one or more amino acid of SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10 has been substituted by one or more amino acid having a similar size, charge and polarity.
- 22. The substantially pure peptide of claim 1, wherein the peptide is covalently linked to an adjuvant.
- 23. The substantially pure peptide of claim 22, wherein the adjuvant is keyhole limpet hemocyanin, bovine serum albumin, human serum albumin or isologous IgG.
- 24. A pharmaceutical composition, comprising a peptide of claim 1 in a pharmaceutically acceptable carrier.
- 25. An isolated nucleic acid sequence encoding a peptide of claim 1.
- 26. The nucleic acid sequence of claim 25, wherein the sequence encodes a peptide having a sequence as set forth in SEQ ID Nos:2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 27. The isolated nucleic acid sequence of claim 26, wherein T can be U or complementary sequences of the foregoing and sequences that are 15-20 nucleotides in length that specifically hybridize to a nucleic acid sequence encoding a peptide having a sequence as set forth in SEQ ID Nos: 2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 28. An antibody which specifically binds to the peptide of claim 1.
- 29. The antibody of claim 28, wherein the antibody is a monoclonal antibody.
- 30. The method of claim 28, wherein the antibody is formulated in a pharmaceutically acceptable carrier.
- 31. An expression vector containing in operable linkage a nucleic acid sequence of claim 25, 26 or 27.
- 32. A host cell containing the vector of claim 31.
- 33. An immunomodulating composition for use in treating or preventing an inflammatory disorder comprising a substantially pure peptide comprising a fragment of a stress protein that binds to one or more MHC class II molecules in a pharmaceutically acceptable carrier.
- 34. The immunomodulating composition of claim 33, wherein the fragment binds to ${\tt HLADR1}$, ${\tt DR4}$ and ${\tt DR7}$.

- 35. The composition of claim 34, wherein the inflammatory disorder is an immune-mediated disease.
- 36. The composition of claim 34, wherein the immune-mediated disease is an auto-immune disease.
- 37. The composition of claim 34, wherein the immune-mediated disease is selected from the group consisting of multiple sclerosis (MS), rheumatoid arthritis, lupus erythrematosis, type I diabetes, scleroderma, myastenia gravis and ulcerative colitis.
- 38. The composition of claim 34, wherein the substantially pure peptide has a sequence as set forth in SEQ ID Nos:2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 39. The composition of claim 34, further comprising a biological response modifier.
- 40. The composition of claim 39, wherein the biological response modifier is selected from the group consisting of a cytokine, a chemokine, a hormone, a steroid and an interleukin.
- 41. The composition of claim 40, wherein the biological response modifier is an interferon.
- 42. The composition of claim 39, wherein the biological response modifier is selected from the group consisting of IL-1(.alpha. or .beta.), IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, GM-CSF, M-CSF, G-CSF, LIF, LT, TGF-.beta., .gamma.-IFN, TNF-.alpha., BCGF, CD2, or ICAM.
- 43. A method for treating or preventing an immune-mediated disease in a subject having or at risk of having the disease comprising administering to the subject, an effective amount of a substantially pure peptide comprising a fragment of a stress protein to binds to MHC class II molecules in a pharmaceutically acceptable carrier, wherein the peptide modulates an immune response, thereby treating or preventing the disease.
- 44. The method of claim 43, wherein the subject is a mammal.
- 45. The method of claim 44, wherein the mammal is a human.
- 46. The method of claim 43, wherein the immune-mediated disease is an auto-immune disease.
- 47. The method of claim 43, wherein the immune-mediated disease is selected from the group consisting of multiple sclerosis (MS), rheumatoid arthritis, lupus erythrematosis, type I diabetes, scleroderma, myastenia gravis and ulcerative colitis.
- 48. The method of claim 43, wherein the immune-mediated disease is a cancer.
- 49. The method of claim 43 wherein the cancer is selected from the group consisting of melanoma, leukemia, lymphoma, lung, liver, kidney, brain, bladder solid tumors, retinoblastoma, sarcoma and connective tissue cancers.
- 50. The method of claim 43, wherein the immune-mediated disease is an infectious disease.
- 51. The method of claim 43, wherein the substantially pure peptide has a sequence as set forth in SEQ ID Nos:2, 3, 4, 5, 6, 7, 8, 9 or 10.
- 52. The method for modulating an immune response in a subject comprising administering to the subject, an effective amount of a substantially pure HLA pan DR-binding peptide comprising a fragment of a stress protein that binds to one or more MHC class II molecules.

- 53. The method of claim 52, wherein the fragment binds to HLADR1, DR4 and DR7.
- 54. The method of claim 52, wherein the subject is a mammal.
- 55. The method of claim 54, wherein the mammal is a human.
- 56. The method of claim 52, wherein the immune response is associated with an immune-mediated disease is selected from the group consisting of multiple sclerosis (MS), rheumatoid arthritis, lupus erythrematosis, type I diabetes, scleroderma, myastenia gravis and ulcerative colitis.
- 57. The method of claim 52, wherein the immune response is associated with an infectious disease.
- 58. The method of claim 52, wherein the immune response is associated with an immune-mediated cancer selected from the group consisting of melanoma, leukemia, lymphoma, lung, liver, kidney, brain, and bladder solid tumors, retinoblastoma, sarcoma, and connective tissue cancers.
- 59. The method of claim 52, wherein the substantially pure peptide has a sequence as set forth in SEQ ID NOS:2, 3, 4, 5, 6, 7, 8, 9 or 10.

Generate Collection

L9: Entry 1 of 4

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030031679

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030031679 A1

TITLE: Immunomodulatory peptides derived from heat shock proteins and uses thereof

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

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US-CL-CURRENT: 424/185.1; 424/190.1

CLAIMS:

- 1. A method of modulating an immune response in a subject, the method comprising administering an immunogenic peptide portion of a <u>dnaJ</u> heat shock protein (hsp) to the subject, thereby modulating an immune response in the subject.
- 2. The method of claim 1, wherein the dnaJ hsp is a bacterial dnaJ hsp.
- 3. The method of claim 2, wherein the bacterial dnaJ hsp is an E. coli dnaJ hsp.
- 4. The method of claim 3, wherein the peptide is: QDYYEILGVSKTAEE (SEQ ID NO:1), RKAYKRLAMKYHPDR (SEQ ID NO:2), QKRAAYDQYGHAAFEQ (SEQ ID NO:3) QGFFAVQQTCPHCQG (SEQ ID NO:4), SKTLSVKIPGAVDTG (SEQ ID NO:5), GDLYVQVQVKQHPIF (SEQ ID NO:6), YCEVPINFAMAALGG (SEQ ID NO:7), PINFAMAALGGEIEV (SEQ ID NO:8), or any combination thereof.
- 5. The method of claim 1, wherein the dnaJ hsp is a eukaryotic dnaJ hsp.
- 6. The method of claim 5, wherein the eukaryotic $\underline{\text{dnaJ}}$ hsp is a yeast $\underline{\text{dnaJ}}$ hsp or a vertebrate $\underline{\text{dnaJ}}$ hsp.
- 7. The method of claim 6, wherein the vertebrate dnaJ hsp is a human dnaJ hsp.
- 8. The method of claim 7, wherein the human dnaJ hsp is HSJ1, HDJ1 or HDJ2.
- 9. The method of claim 8, wherein the peptide is homologous to a peptide portion of a bacterial dnaJ hsp
- 10. The method of claim 9, wherein the peptide is: ASYYEILDVPRSASA (SEQ ID NO:9), KDYYQTLGLARGASD, (SEQ ID NO:10), TTYYDVLGVKPNATQ (SEQ ID NO:11), KKAYRRKALQWHPDK (SEQ ID NO:12), KRAYRRQALRYHPDK (SEQ ID NO:13), KKAYRKLALKYHPDK (SEQ ID NO:14), FRSVSTSTTFVQGRR (SEQ ID NO:15), PGMVQQIQSVCMECQ (SEQ ID NO:16), GRRITTRRIMENGQE (SEQ ID NO:17), or any combination thereof.
- 11. The method of claim 8, wherein the peptide is not homologous to a peptide portion of a bacterial dnaJ hsp.

- 12. The method of claim 11, wherein the peptide is: QAYEVLSDAKKRELYD (SEQ ID NO:18), EAYEVLSDKHKREIYD (SEQ ID NO:19), SGPFFTFSSSFPGHS (SEQ ID NO:20), DGQLKSVTINGVPDD (SEQ ID NO:21), DLQLAMAYSLSEMEA (SEQ ID NO:22), EDLFMCMDIQLVEAL (SEQ ID NO:23), LCGFQKPISTLDNRT (SEQ ID NO:24), RTIVITSHPGQIVKH (SEQ ID NO:25), GRLIIEFKVNFPENG (SEQ ID NO:26), or any combination thereof.
- 13. The method of claim 1, wherein modulating the immune response comprises augmenting or inducing an inflammatory response in the subject.
- 14. The method of claim 13, wherein the peptide has pro-inflammatory activity, and wherein augmenting or inducing the inflammatory response comprises administering the peptide under immunizing conditions.
- 15. The method of claim 13, wherein the peptide has anti-inflammatory activity, and wherein augmenting or inducing the inflammatory response comprises administering the peptide under tolerizing conditions.
- 16. The method of claim 13, wherein augmenting or inducing the inflammatory response comprises increasing a level of interferon gamma (IFN.gamma.), tumor necrosis factor-alpha (TNF.alpha.), or both in the subject.
- 17. The method of claim 13, wherein augmenting or inducing the inflammatory response comprises increasing a level of interleukin-1(IL-1), IL-6, IL-12, IL-23, or a combination thereof in the subject.
- 18. The method of claim 13, wherein augmenting or inducing the inflammatory response comprises decreasing a level of IL-4, IL-10, transforming growth factor-beta (TGF.beta.), or a combination thereof in the subject.
- 19. The method of claim 1, wherein modulating the immune response comprises reducing or inhibiting an inflammatory response in the subject.
- 20. The method of claim 19, wherein the peptide has anti-inflammatory activity, and wherein reducing or inhibiting the inflammatory response comprises administering the peptide under immunizing conditions.
- 21. The method of claim 19, wherein the peptide has pro-inflammatory activity, and wherein reducing or inhibiting the inflammatory response comprises administering the peptide under tolerizing conditions.
- 22. The method of claim 19, wherein reducing or inhibiting the inflammatory response comprises increasing a level of IL-10, IL-4, TGF.beta., or a combination thereof in the subject.
- 23. The method of claim 19, wherein reducing or inhibiting the inflammatory response comprises decreasing a level of IFN.gamma., TNF.alpha., or both in the subject.
- 24. The method of claim 19, wherein augmenting or inducing the inflammatory response comprises decreasing a level of IL-1, IL-6, IL-12, IL-23, or a combination thereof in the subject.
- 25. The method of claim 1, wherein administering the peptide comprises administering the peptide under immunizing conditions.
- 26. The method of claim 25, wherein administering the peptide under immunizing conditions comprising administering the peptide intradermally, subcutaneously, or intramuscularly.
- 27. The method of claim 25, wherein the peptide is formulated in a composition, and wherein the composition further comprises an immunoadjuvant.
- 28. The method of claim 1, wherein administering the peptide comprises administering the peptide under tolerizing conditions.
- 29. The method of claim 28, wherein administering the peptide under tolerizing

conditions comprising administering the peptide mucosally.

- 30. The method of claim 28, wherein administering the peptide under tolerizing conditions comprising administering the peptide intradermally, subcutaneously, or intramuscularly.
- 31. The method of claim 1, wherein the subject has an immunological disorder.
- 32. The method of claim 31, wherein the immunological disorder is an autoimmune disease.
- 33. The method of claim 32, wherein the autoimmune disease is an arthritis.
- 34. The method of claim 33, wherein the $\frac{\text{arthritis}}{\text{arthritis}}$ is articular juvenile idiopathic $\frac{\text{arthritis}}{\text{arthritis}}$.
- 35. The method of claim 1, wherein the subject suffers from an infectious disease, an inflammatory bowel disease, or a cancer.
- 36. A method of modulating immunoeffector cell responsiveness, the method comprising contacting immunoeffector cells with a peptide portion of a $\underline{\text{dnaJ}}$ heat shock protein (hsp) to the subject.
- 37. The method of claim 36, wherein the dnaJ hsp is a bacterial dnaJ hsp.
- 38. The method of claim 37, wherein the bacterial <u>dnaJ</u> hsp is an E. coli <u>dnaJ</u> hsp selected from: QDYYEILGVSKTAEE (SEQ ID NO:1), RKAYKRLAMKYHPDR (SEQ ID NO:2), QKRAAYDQYGHAAFEQ (SEQ ID NO:3) QGFFAVQQTCPHCQG (SEQ ID NO:4), SKTLSVKIPGAVDTG (SEQ ID NO:5), GDLYVQVQVKQHPIF (SEQ ID NO:6), YCEVPINFAMAALGG (SEQ ID NO:7), PINFAMAALGGEIEV (SEQ ID NO:8), or any combination thereof.
- 39. The method of claim 36, wherein the dnaJ hsp is a eukaryotic dnaJ hsp.
- 40. The method of claim 39, wherein the eukaryotic dnaJ hsp is a human dnaJ hsp.
- 41. The method of claim 40, wherein the peptide is homologous to a peptide portion of a bacterial \underline{dnaJ} hsp.
- 42. The method of claim 41, wherein the peptide is: ASYYEILDVPRSASA (SEQ ID NO:9), KDYYQTLGLARGASD (SEQ ID NO:10), TTYYDVLGVKPNATQ (SEQ ID NO:11), KKAYRRKALQWHPDK (SEQ ID NO:12), KRAYRRQALRYHPDK (SEQ ID NO:13), KKAYRKLALKYHPDK (SEQ ID NO:14), FRSVSTSTTFVQGRR (SEQ ID NO:15), PGMVQQIQSVCMECQ (SEQ ID NO:16), GRRITTRRIMENGQE (SEQ ID NO:17), or any combination thereof.
- 43. The method of claim 42, wherein the peptide is not homologous to a peptide portion of a bacterial $\underline{\text{dnaJ}}$ hsp.
- 44. The method of claim 43, wherein the peptide is: QAYEVLSDAKKRELYD (SEQ ID NO:18), EAYEVLSDKHKREIYD (SEQ ID NO:19), SGPFFTFSSSFPGHS (SEQ ID NO:20), DGQLKSVTINGVPDD (SEQ ID NO:21), DLQLAMAYSLSEMEA (SEQ ID NO:22), EDLFMCMDIQLVEAL (SEQ ID NO:23), LCGFQKPISTLDNRT (SEQ ID NO:24), RTIVITSHPGQIVKH (SEQ ID NO:25), GRLIIEFKVNFPENG (SEQ ID NO:26), or any combination thereof.
- 45. The method of claim 36, wherein contacting the immunoeffector cells comprises administering the peptide to a subject, wherein said contacting occurs in vivo.
- 46. The method of claim 36, wherein contacting the immunoeffector cells is performed in vitro.
- 47. The method of claim 46, further comprising administering the immunoeffector cells to a subject, thereby modulating an immune response in the subject.
- 48. The method of claim 47, wherein the immunoeffector cells are autologous with respect to the subject.

- 49. The method of claim 47, wherein the immunoeffector cells are allogeneic with respect to the subject.
- 50. The method of claim 47, wherein modulating the immune response comprises augmenting or inducing an inflammatory response in the subject.
- 51. The method of claim 47, wherein modulating the immune response comprises reducing or inhibiting an inflammatory response in the subject.
- 52. The method of claim 36, wherein the immunoeffector cells are T cells.
- 53. The method of claim 36, further comprising contacting the immunoeffector cells with an immunoadjuvant.
- 54. The method of claim 53, wherein the immunoadjuvant is a cytokine.
- 55. The method of claim 54, wherein the cytokine is a pro-inflammatory cytokine.
- 56. The method of claim 55, wherein the cytokine is an anti-inflammatory cytokine.
- 57. A peptide selected from any one of SEQ ID NOS:1 to 26.
- 58. A chimeric polypeptide, comprising the peptide of claim 57 operatively linked to at least one heterologous polypeptide.
- 59. A composition, comprising at least one peptide of claim 57.
- 60. The composition of claim 59, comprising a plurality of said peptides.
- 61. The composition of claim 60, which further comprises a physiologically acceptable solution.
- 62. The composition of claim 57, which further comprises an immunoadjuvant.
- 63. The composition of claim 62, wherein the immunoadjuvant is a cytokine.
- 64. The composition of claim 63, wherein the cytokine has pro-inflammatory activity.
- 65. The composition of claim 63, wherein the cytokine has anti-inflammatory activity.
- 66. The composition of claim 62, wherein the immunoadjuvant comprises Freund's complete adjuvant, Freund's incomplete adjuvant, or alum.
- 67. A polynucleotide encoding the peptide of claim 57.
- 68. The polynucleotide of claim 67, which is a double stranded deoxyribonucleic acid molecule.
- 69. A recombinant nucleic acid molecule, comprising the polynucleotide of claim 67 operatively linked to at least one heterologous nucleotide sequence.
- 70. The recombinant nucleic acid molecule of claim 69, wherein the heterologous nucleotide sequence comprises a transcription regulatory element, a translation regulatory element, or a combination thereof.
- 71. The recombinant nucleic acid molecule of claim 69, wherein the heterologous nucleotide sequence encodes a polypeptide.
- 72. A vector, which contains the polynucleotide of claim 67.
- 73. A cell, which contains the polynucleotide of claim 67.

Generate Collection

L9: Entry 2 of 4

File: PGPB

Sep 5, 2002

PGPUB-DOCUMENT-NUMBER: 20020122818

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020122818 A1

TITLE: Methods for isolation, quantification, characterization and modulation of antigen-specific T cells

PUBLICATION-DATE: September 5, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY

RULE-47

Albani, Salvatore

San Diego

CA

US-CL-CURRENT: 424/450; 424/185.1, 424/261.1

CLAIMS:

- 1. An artificial antigen presenting cell comprising: a) liposome components, said components forming lipid bilayers of a liposome; b) GM-1 components, said GM-1 comprising at least one GM-1 molecule, said GM-1 contacting said liposome components; c) cholera toxin .beta. subunit components; said .beta. subunit components comprising at least a portion of said subunit capable of binding a GM-1 molecule; d) MHC components, said MHC components comprising immunologically active molecules and contacting at least said cholera .beta. subunit; e) antigen components, said antigen components contacting at least said MHC components; and f) accessory molecule components, said accessory molecule components providing for a stabilizing property to an interaction between a T cell receptor and said MHC and said antigen components.
- 2. An artificial antigen presenting cell according to claim 1 wherein said GM-1 components form rafts comprising multiples of said GM-1 molecules in said lipid bilayers.
- 3. An artificial antigent presenting cell according to claim 2 wherein said rafts are present in said lipid bilayer at high density.
- 4. An artificial antigen presenting cell according to claim 3 further comprising immunologically active molecules selected from the group consisting of co-stimulatory molecules, adhesion molecules, and cell modulation molecules.
- 5. An artificial antigen presenting cell according to claim 3 futher comprising irrelevant molecules selected from the group consisting of molecules for binding said artificial antigen presenting cell to a solid support, and a label.
- 6. An artificial antigen presenting cell comprising: a) liposome components, said components forming lipid bilayers of a liposome; b) GM-1 components, said GM-1 comprising at least one GM-1 molecule, said GM-1 contacting said liposome components; c) cholera toxin .beta. subunit components; said .beta. subunit components comprising at least a portion of said subunit capable of binding a GM-1 molecule; d) tetravidin components, said tetravidin capable to binding said cholera toxin, said tetravidin further capable of binding between 1 and 3 immunologically active molecules; e) MHC components, said MHC components comprising immunologically active molecules and contacting at least said cholera .beta. subunit; f) antigen components, said antigen components contacting at least said MHC components; and g) accessory molecule components, said accessory molecule components providing for a

stabilizing property to an interaction between a T cell receptor and said MHC and said antigen components, said accessory molecules comprising said immunologically active molecules of (d).

- 7. An artificial antigen presenting cell according to claim 6 wherein said GM-1 components form rafts comprising multiples of said GM-1 molecules in said lipid bilayers.
- 8. An artificial antigent presenting cell according to claim 7 wherein said rafts are present in said lipid bilayer at high density.
- 9. An artificial antigen presenting cell according to claim 8 further comprising immunologically active molecules selected from the group consisting of co-stimulatory molecules, adhesion molecules, and cell modulation molecules.
- 10. An artificial antigen presenting cell according to claim 8 futher comprising irrelevant molecules selected from the group consisting of molecules for binding said artificial antigen presenting cell to a solid support, and a label.
- 11. A method of modulating antigen specific T cells comprising contacting a T cell with an aAPC or claims 1 or 6, incubating said Tcells with said aAPC, and monitoring said T cell for modulation.

Generate Collection

L9: Entry 3 of 4

File: USPT

Nov 28, 2000

US-PAT-NO: 6153200

DOCUMENT-IDENTIFIER: US 6153200 A

TITLE: Vaccine compositions and methods useful in inducing immune protection against arthritogenic peptides involved in the pathogenesis of rheumatoid arthritis

DATE-ISSUED: November 28, 2000

INVENTOR-INFORMATION:

NAME

CLAIMS:

CITY

STATE ZIP CODE

COUNTRY

Carson; Dennis A.
Albani; Salvatore

Del Mar Encinitas CA CA

US-CL-CURRENT: $\underline{424}/\underline{201.1}; \ \underline{424}/\underline{184.1}, \ \underline{424}/\underline{203.1}, \ \underline{514}/\underline{12}, \ \underline{514}/\underline{2}, \ \underline{514}/\underline{4}, \ \underline{514}/\underline{8}$

- 1. A method useful in inducing immune protection against arthritogenic peptides in a host comprising administering an immunologically effective amount of isolated and purified bacterial dnaJpl peptide having the amino acid sequence of SEQ ID NO:4 to the host.
- 2. The method of claim 1, wherein the dnaJpl peptide is a synthetic or recombinant peptide.
- 3. The method of claim 1, further comprising administering to the host $\underline{\text{dnaJ}}$ polypeptides other than $\underline{\text{dnaJpl}}$ peptide.
- 4. The method of claim 3, wherein the $\underline{\text{dnaJ}}$ polypeptide is a recombinant or synthetic polypeptide.
- 5. The method of claim 3, wherein the $\underline{\text{dnaJ}}$ polypeptide is found in a $\underline{\text{human dnaJ}}$ protein.
- 6. The method of claim 1, wherein the dnaJpl peptide is produced by $\frac{\text{bacteria}}{\text{Lactococcus}}$, selected from at least one of the genera consisting of Escherichia, $\frac{\text{Lactococcus}}{\text{Lactococcus}}$, Klebsiella, Proteus, and Salmonella.
- 7. The method of claim 1, further comprising an immunostimulatory compound.
- 8. The method of claim 7, wherein the immunostimulatory compound is TGF-.alpha..

End of Result Set

Generate Collection

L9: Entry 4 of 4

File: USPT

Jun 30, 1998

US-PAT-NO: 5773570

DOCUMENT-IDENTIFIER: US 5773570 A

TITLE: Vaccine compositions and methods useful in inducing immune protection against arthritogenic peptides involved in the pathogenesis of rheumatoid arthritis

DATE-ISSUED: June 30, 1998

INVENTOR-INFORMATION:

NAME

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US-CL-CURRENT: $\frac{424}{201.1}$; $\frac{424}{184.1}$, $\frac{424}{203.1}$, $\frac{514}{12}$, $\frac{514}{2}$, $\frac{514}{4}$, $\frac{514}{4}$, $\frac{514}{8}$,

CLAIMS:

We claim:

- 1. A vaccine useful in inducing immune protection against arthritogenic peptides in a host comprising isolated and purified bacterial dnaJpl peptide having the amino acid sequence of SEQ ID NO:4 in a pharmaceutically acceptable carrier.
- 2. The vaccine according to claim 1 wherein the dnaJp1 peptide is a synthetic or recombinant peptide.
- 3. The vaccine according to claim 1 further comprising $\underline{\text{dnaJ}}$ polypeptides other than dnaJp1 peptide.
- 4. The vaccine according to claim 3 wherein the $\underline{\text{dnaJ}}$ polypeptide is a recombinant or synthetic polypeptide.
- 5. The vaccine according to claim 3 wherein the $\underline{\text{dnaJ}}$ polypeptide is found in a $\underline{\text{human dnaJ}}$ protein.
- 6. The vaccine according to claim 1, wherein the dnaJpl peptide is produced by bacteria selected from at least one of the genera consisting of Escherichia, Lactococcus, Klebsiella, Proteus, and Salmonella.
- 7. The vaccine according to claim 1 further comprising an immunostimultory compound.
- 8. The vaccine according to claim 7 wherein the immunostimulatory compound is $\overline{\text{TGF}}$ -.alpha..